

Material Safety Data Sheet



SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Phenol-Formaldehyde Bonded Wood Products plus a polyurethane film: softwood and hardwood plywood (veneer core), oriented strand board, laminated veneer lumber, and wood I-joists.
Trade Name:	Laminated veneer lumber (LVL): VERSA-LAM®, VERSA-RIM®, Plywood: Sheathing Oriented Strand Board (OSB): Sheathing Wood I-Joist: BCI®
Manufacturer/Distributor:	Boise Cascade Corporation P.O. Box 62 Boise, ID 83707-0062
Phone Number:	208/384-6534
Description:	The plywood panel product contains bonded layers of softwood and hardwood veneer. The Oriented Strand Board is manufactured with narrow strands of wood fiber connected lengthwise and crosswise in layers. The laminated veneer lumber is manufactured with all grain parallel with the length of the member. The wood I-joists are manufactured with LVL flanges bonded to either plywood or OSB webs. These products are bonded together with resins that comply with ASTM D2559.

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL OR COMPONENT	C.A.S. #	PERCENT
Formaldehyde	50-00-0	<0.1% by weight
Solid Polyurethane Film	Not Applicable	2.67% by weight
Wood Dust (soft and most hardwoods, except Western Red Cedar, Beech, and Oak)	Not Applicable	
Component	OSHA PEL	ACGIH TLV
Formaldehyde (<0.1% by weight)	0.75 ppm TWA 2.0 ppm STEL 0.5 ppm Action Level	0.3 ppm STEL
Solid Polyurethane Film	Not applicable	Not applicable
Wood Dust (soft and most hardwoods, except Western Red Cedar, Beech, and Oak)	15.0 mg/m ³ TWA (Total) 5.0 mg/m ³ TWA (Respirable)	Wood Dust -Nonallergenic & noncarcinogenic - 2 mg/m ³ -other respiratory allergenic wood dust - 1 mg/m ³

SECTION 3 HAZARDS IDENTIFICATION

INHALATION

Dust may cause nasal dryness, irritation, coughing, and sinusitis. Repeated exposures (even below 5 mg/m³) to certain wood dusts can produce allergic responses in some sensitive individuals.

SKIN CONTACT

Both formaldehyde and various species of wood dust may evoke allergic contact dermatitis in sensitized individuals.

SKIN ABSORPTION

Not applicable for product in purchased form.

EYE CONTACT

Dust may cause temporary irritation, mechanical irritation, or a burning sensation to the eyes.

INGESTION

Not applicable for product in purchased form.

WOOD DUST: Wood dust may cause nasal dryness, irritation, and obstruction. Coughing, wheezing, and sneezing; sinusitis and prolonged colds have also been reported.

Depending on species, may cause respiratory sensitization and/or irritation. Wood dust is not considered a potential cancer hazard by OSHA. The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.

FORMALDEHYDE: May cause temporary irritation to eyes, nose and throat. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and the preexisting respiratory disorders may be aggravated by exposure.

Formaldehyde is listed by IARC as a probable human carcinogen. The NTP includes formaldehyde in the Annual Report on Carcinogens. Formaldehyde is regulated by OSHA as a potential cancer agent.

In studies involving rats, formaldehyde has been shown to cause nasal cancer after long-term exposure to very high concentrations (14+ ppm), far above those normally found in the workplace using this product.

The National Cancer Institute (NCI) conducted an epidemiological study of industrial workers exposed to formaldehyde (published June 1986). The NCI concluded that the data provides little evidence that mortality from cancer is associated with formaldehyde exposure at the levels experienced by workers in the study.

Polyurethane Film is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

SECTION 4 FIRST-AID MEASURES

INHALATION

Remove to fresh air. If persistent irritation, severe coughing, or breathing difficulty occurs, get medical attention.

EYE CONTACT

Remove contact lenses (if applicable). Flush eyes, including under eyelids, with large amounts of water. Remove to fresh air. If irritation persists, get medical attention.

SKIN CONTACT

Wash affected areas with soap and water. If rash or persistent irritation or dermatitis occurs, get medical attention.

INGESTION

Not applicable for product in purchased form.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION

FLASH POINT

Not applicable

AUTO IGNITION TEMPERATURE

Dependent upon duration of exposure to heat source and other variables.
400° - 500°F (204° - 260°C)

FLAMMABLE LIMITS IN AIR (% BY VOLUME)

An airborne concentration of 40 grams of dust per cubic meter of air is often used as the lowest explosion limit (LEL) for wood dust.

Formaldehyde

LEL 7% UEL 73%

SPECIAL FIRE FIGHTING PROCEDURES

Burns like other wood products, although it is dangerous and may burn hotter. Partially burned dust is especially hazardous if dispersed into the air. Remove burned or wet dust to an open area after fire is extinguished.

EXTINGUISHING MEDIA

Water, carbon dioxide, sand.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Not applicable for product in purchased form. Sweep or vacuum dust for recovery or disposal. Wood dust cleanup and disposal activities should be accomplished in a manner to minimize creation of airborne dust.

*Appropriate Regulatory Agencies should be notified in the event of an accident.

SECTION 7 HANDLING AND STORAGE

Provide adequate ventilation to reduce the possible buildup of formaldehyde gas, particularly when high temperatures occur. Avoid dusty conditions and provide good ventilation. PF-bonded wood products should not be stored where exposure to water could occur. Wood products are combustible and, therefore, should not be subjected to temperatures exceeding the autoignition temperature.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

Wear NIOSH-approved respirator when the allowable OSHA exposure limits to wood dust and/or formaldehyde may be exceeded.

EYE PROTECTION

Recommend goggles or safety glasses as conditions indicate when sawing, sanding, or machining wood products.

SKIN PROTECTION

Other protective equipment, such as gloves and outer garments, may be needed to reduce skin contact. Wash affected area of the body after contact with dust.

OTHER CLOTHING AND EQUIPMENT

Not Applicable

ENGINEERING CONTROLS

VENTILATION REQUIREMENTS

Provide local exhaust, as necessary, to meet OSHA requirements for allowable exposure limits.

OTHER TYPES OF ENGINEERING CONTROLS

Due to the explosive potential of wood dust when suspended in air, precautions should be taken during sanding, sawing, or machining of wood products to prevent sparks or other ignition sources in ventilation equipment.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM.....	:	Solid
COLOR.....	:	Light to dark tan. Color and odor are dependent upon wood species.
ODOR.....	:	Dependent upon wood species.
BOILING POINT.....	:	Not applicable.
MELT POINT/FREEZE POINT.....	:	Not applicable.
pH	:	Not applicable
SOLUBILITY IN WATER.....	:	<0.1%
SPECIFIC GRAVITY.....	:	<1.0
EVAPORATION RATE.....	:	Not applicable.
% VOLATILE BY VOLUME.....	:	Not applicable.
VAPOR PRESSURE.....	:	Not applicable.
VAPOR DENSITY.....	:	Not applicable.

SECTION 10 STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

Stable under normal conditions. Wood dust generated from sawing, sanding, or machining the product is extremely combustible. Keep in cool, dry place away from ignition sources.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with oxidizing agents and drying oils. Avoid open flame.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal-oxidation degradative or burning of wood can produce irritating and potentially toxic fumes and gases, including carbon monoxide, aldehydes, organic acids, nitrogen compounds, hydrogen cyanide, and various hydrocarbons.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

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The National Cancer Institute (NCI) conducted an epidemiological study of industrial workers exposed to formaldehyde (published June 1986). The NCI concluded that the data provides little evidence that mortality from cancer is associated with formaldehyde exposure at the levels experienced by workers in the study.

Polyurethane film is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

SECTION 12 ECOLOGICAL INFORMATION

Not applicable for product in purchased form.

SECTION 13 DISPOSAL CONSIDERATIONS

This product is not considered hazardous waste under Federal Hazardous Waste Regulations 40 CFR 261. State and local requirements for waste disposal may be different from federal regulations. Incinerate or landfill in accordance with local, state, and federal regulations.

HAZARDOUS WASTE DESIGNATION

Not applicable

SECTION 14 TRANSPORT INFORMATION

DOT (Department of Transportation)

Proper Shipping Name:	Phenol-formaldehyde bonded wood products plus a polyurethane film
Hazard Class:	Combustible
Identification Number:	Not applicable

SECTION 15 REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):

Not applicable for product in purchased form.

CERCLA (Comprehensive Response Compensation and Liability Act):

Not applicable for product in purchased form.

SARA Title III:

Not applicable for product in purchased form.

SECTION 16 OTHER INFORMATION

This fact sheet is for products that have not been finished (coated, laminated, or overlaid) or treated (for example, with preservative or fire retardant).

Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust categories at PELs of: TWA - 15.0 mg/m³ (total dust); 5.0 mg/m³ (respirable fraction). However, a number of states have incorporated provisions of the 1989 standard in their state plans. Additionally, OSHA has announced that it may cite companies under the OSH Act General Duty Clause under appropriate circumstances for noncompliance with the 1989 PELs.

MSDS Status: Updated to new format.

References:

Isoaset Adhesive Cured Film MSDS, 05/12/98, Ashland Chemical Company
Isoaset CX-47 MSDS, 08/18/98, Ashland Chemical Company
Isoaset UX 100 MSDS, 08/20/98, Ashland Chemical Company
Isoaset WD3-A320 MSDS, 09/28/98, Ashland Chemical Company
Isoaset WD3-A322 MSDS, 01/26/98, Ashland Chemical Company
Polyisocyanate Type 1 MSDS, 08/18/98, Ashland Chemical Company
BB-703 MSDS, 01/26/98, Neste Resins, Canada
Chembond, Liquid Phenol Formaldehyde Resin MSDS, 10/01/93, Neste Resins Corporation
Niaproof Anionic Surfactant 08 MSDS, 07/01/97, Van Waters & Rogers Inc.
HM-8266-L & HM-6266-L MSDS(s), 02/10/98 & 03/10/98, Linear Products Inc.
Cascowax EW-58S MSDS, 04/18/97, Borden Chemical Company
Cascophen LT-5210J (Liquid PRF Resin)MSDS, 01/11/99, Borden Chemical Company
Cascoset FM-6210S (Paraformaldehyde Catalyst) MSDS, 01/28/97, Borden Chemical Company
Cascophen Resins (Liquid PF Resins)MSDS(s), 05/30/96 through 10/07/98, Borden Chemical Company
Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1998
NIOSH Pocket Guide to Chemical Hazards for June 1997
Hazardous Chemicals Desk Reference, Third Edition, Richard J. Lewis, Sr.

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Current Issue: 02/02/99
Previous Issue: 12/21/98